Report Date: January 13, 2016

Priority 2 Species of Greatest Conservation Need (SGCN)

Class: Insecta (Insects)

Order: Hymenoptera (Ants, Bees, Wasps And Sawflies)
Family: Apidae (Honey Bees, Bumble Bees, And Allies)

General comments:

no modern occurrences post mid 1990s - possibly extirpated; this species is an obligate nest parasite on B. affinis (SH) and B. terricola (SU), the latter which still persists in recent Maine collections, so could potentially support some lingering populations

Species Conservation Range Maps for Ashton's Cuckoo Bumble Bee:

Town Map: <u>Bombus ashtoni_Towns.pdf</u>
Subwatershed Map: <u>Bombus ashtoni_HUC12.pdf</u>

SGCN Priority Ranking - Designation Criteria:

Risk of Extirpation: NA

State Special Concern or NMFS Species of Concern:

Bombus ashtoni is listed as a species of Special Concern in Maine.

Recent Significant Declines:

Ashton's Cuckoo Bumble Bee is currently undergoing steep population declines, which has already led to, or if unchecked is likely to lead to, local extinction and/or range contraction.

Notes: no modern occurrences post mid 1990s - possibly extirpated; this species is an obligate nest parasite on B. affinis (SH) and B. terricola (SU), the latter which still persists in recent Maine collections, so could potentially support some lingering popula

Regional Endemic: NA

High Regional Conservation Priority: NA High Climate Change Vulnerability: NA

Understudied rare taxa: NA

Historical:

Species currently listed as state (SH) or global (GH) historical (by MDIFW or NatureServe) that have some reasonable probability of rediscovery with further survey effort.

State Rank: SH, Global Rank: GH, Rounded Global Rank: GH, MDIFW Historical: Yes

MDIFW Historical Notes: no modern occurrences post mid 1990s - possibly extirpated; this species is an obligate nest parasite on B. affinis (SH) and B. terricola (SU), the latter which still persists in recent Maine collections, so could potentially support some lingering popula

Culturally Significant: NA

Habitats Assigned to Ashton's Cuckoo Bumble Bee:

Formation Name Agricultural

Macrogroup Name Agricultural

Habitat System Name: Cultivated Crops Notes: habitat generalist (woodlands, parks, gardens, etc)
Habitat System Name: Pasture-Hay Notes: habitat generalist (woodlands, parks, gardens, etc)

Formation Name Boreal Upland Forest

Macrogroup Name Boreal Upland Forest

Habitat System Name: Boreal Upland Forest Macrogroup - Unknown Habitat System **Notes:** *habitat generalist (woodlands, parks, gardens, etc)*

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Formation Name Developed

Macrogroup Name Urban-Suburban Built

Habitat System Name: Residential - Low Intensity Notes: habitat generalist (woodlands, parks, gardens, etc)
Habitat System Name: Residential - Rural-Sparse Notes: habitat generalist (woodlands, parks, gardens, etc)

Formation Name Grassland & Shrubland

Macrogroup Name Ruderal Shrubland & Grassland

Habitat System Name: Ruderal Upland - Old Field Notes: habitat generalist (woodlands, parks, gardens, etc)

Formation Name Northeastern Upland Forest

Macrogroup Name Central Oak-Pine

Habitat System Name: Central Oak-Pine Macrogroup - Unknown Habitat System Notes: habitat generalist (woodlands,

parks, gardens, etc)

Macrogroup Name Northern Hardwood & Conifer

Habitat System Name: Northern Hardwood & Conifer Macrogroup - Unknown Habitat System Notes: habitat generalist

(woodlands, parks, gardens, etc)

Stressors Assigned to Ashton's Cuckoo Bumble Bee:

Stressor Priority Level based on Severity and Actionability

	Moderate Severity	High Severity
Highly Actionable	Medium-High	High
Moderately Actionable	Medium	Medium-High
Actionable with Difficulty	Low	Low

IUCN Level 1 Threat Other Options

IUCN Level 2 Threat: Lack of knowledge

Severity: Moderate Severity Actionability: Highly actionable

Notes: No modern EOs in ME; lack of comprehensive statewide survey effort to identify occurrences and determine

species status

IUCN Level 1 Threat Pollution

IUCN Level 2 Threat: Agricultural and Forestry Effluents

Severity: Severe Actionability: Moderately actionable

Notes: Pesticides (e.g., seed/nursery stock innoculation, agricultural applications); past impacts (i.e., severe declines)

actionable with difficulty, but future impacts moderately actionable (e.g., changes in pesticide type and use)

IUCN Level 1 Threat Agriculture and Aquaculture

IUCN Level 2 Threat: Annual and Perennial Non-timber crops

Severity: Moderate Severity Actionability: Moderately actionable

Notes: Habitat loss and fragmentation via intensive land management practices; can also create foraging and nesting

nabitat

IUCN Level 1 Threat Residential and Commercial Development

IUCN Level 2 Threat: Commercial and Industrial Areas

Severity: Moderate Severity Actionability: Moderately actionable

Notes: Habitat loss and fragmentation

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IUCN Level 1 Threat Residential and Commercial Development

IUCN Level 2 Threat: Housing and Urban Areas

Severity: Moderate Severity **Actionability:** Moderately actionable

Notes: Habitat loss and fragmentation; can also create foraging habitat

IUCN Level 1 Threat Invasive and Other Problematic Species, Genes and Diseases

IUCN Level 2 Threat: Invasive Non-native-Alien Species-Diseases

Severity: Severe Actionability: Actionable with difficulty

Notes: Introduced pathogens, parasites/diseases from imported commercial Bombus colonies; past impacts are likely

irreversible, but future impacts potentially could be minimized/prevented; impacts from invasive plants?

IUCN Level 1 Threat Other Options

IUCN Level 2 Threat: Other Threat

Severity: Moderate Severity Actionability: Actionable with difficulty

Notes: Severe decline/loss of Bombus host species

IUCN Level 1 Threat Transportation and Service Corridors

IUCN Level 2 Threat: Roads and Railroads

Severity: Moderate Severity Actionability: Actionable with difficulty

Notes: Collision with vehicles; habitat loss and fragmentation

Species Level Conservation Actions Assigned to Ashton's Cuckoo Bumble Bee:

None. Only species specific conservation actions that address high (red) or medium-high (orange) priority stressors are summarized here.

Conservation Actions Associated with the Bumble Bees Guild:

Conservation Action Category: Survey and Monitoring Biological Priority: high Type: on-going

Conduct statewide surveys to document species diversity, distribution and relative abundance.

Stressor(s) Addressed By This Conservation Action

Lack of knowledge

Conservation Action Category: Research Biological Priority: high Type: new

Produce a statewide atlas and conservation assessment

Stressor(s) Addressed By This Conservation Action

Lack of knowledge

Conservation Action Category: Public Outreach Biological Priority: moderate Type: new

Develop and implement outreach materials to raise public awareness of native pollinator ecology, threats and conservation

needs, and to encourage use of Integrated Pest Management practices.

Stressor(s) Addressed By This Conservation Action

Agricultural and Forestry Effluents

Broad Taxonomic Group Conservation Actions:

Additional relevant conservation actions for this species are assigned within broader taxonomic groups in Maine's 2015 Wildlife Action Plan: Element 4, Table 4-1.

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Habitat Based Conservation Actions:

Additional conservation actions that may benefit habitat(s) associated with this species can be found in Maine's 2015 Wildlife Action Plan: Element 4, Table 4-15. Click on the Habitat Grouping of interest to launch a habitat based report summarizing relevant conservation actions and associated SGCN.

The Wildlife Action Plan was developed through a lengthy participatory process with state agencies, targeted conservation partners, and the general public. The Plan is non-regulatory. The species, stressors, and voluntary conservation actions identified in the Plan complement, but do not replace, existing work programs and priorities by state agencies and partners.